

May 2019



# MONTANA GEOLOGICAL SOCIETY NEWSLETTER

Vol 63 No. 6



## Inside this Issue:



### **P2 / PRESIDENT'S LETTER**

Our President is ready to adventure out in Montana's summer weather -- are you?



### **P4 / ROAD LOGS**

Don't forget to reference this online MGS resource including a plethora of digitized statewide Road Logs.



### **P7 / TOTY**

The application period is nearly closed for this year's MGS Teacher of the Year award.



### **P9 / CALL FOR PAPERS**

Check out deadlines & additional information for the upcoming RMS-AAPG Section Meeting.

Contact Us:

[mtgeo.org](http://mtgeo.org) / [montanageologicalsociety@gmail.com](mailto:montanageologicalsociety@gmail.com)

*Add our email address to your contacts so your Newsletters & Luncheon announcements don't end up in Spam!*

Find us on 

PO Box 844  
Billings, MT 59103

# President's Letter

Dear Membership,

The weather is warming up. Days of sunshine are in the forecast. Field season is upon us. Just before my first trip into the field I like to make sure all my equipment is up to snuff. Do my boots still have tread? Is my raincoat still waterproof? Is my first aid kit fully stocked with unexpired medicine? I encourage anyone planning on spending time outdoors this summer to take a moment to inventory all their outdoor summer gear and make sure it will be able to protect you through whatever the Montana summer can throw at you. Nothing ruins an outing like finding out your sunscreen bottle is empty while on that hike in the mountains.

Where ever you find yourself this summer, have fun and stay safe!

MGS President,  
Sarah Friedman

## 2018-2019 MGS Officers

President	Sarah Friedman	406-896-5931
Vice President/Speaker Coordinator	Tom Hewett	406-281-8203
Treasurer	Spenser Kuhn	406-696-0268
Secretary	Felipe Pimentel	352-514-3607
Past President	Felipe Pimentel	

# ROAD TRIP!

*Where are you going this summer?  
If your summer vacation includes Montana geology, we'd love to see it!*

To submit your photos for inclusion in the MGS Newsletter & MGS Facebook page, please submit your high-resolution photograph(s), caption(s) and full name to [montanageologicalsociety@gmail.com](mailto:montanageologicalsociety@gmail.com)

## Who's Who of the MGS

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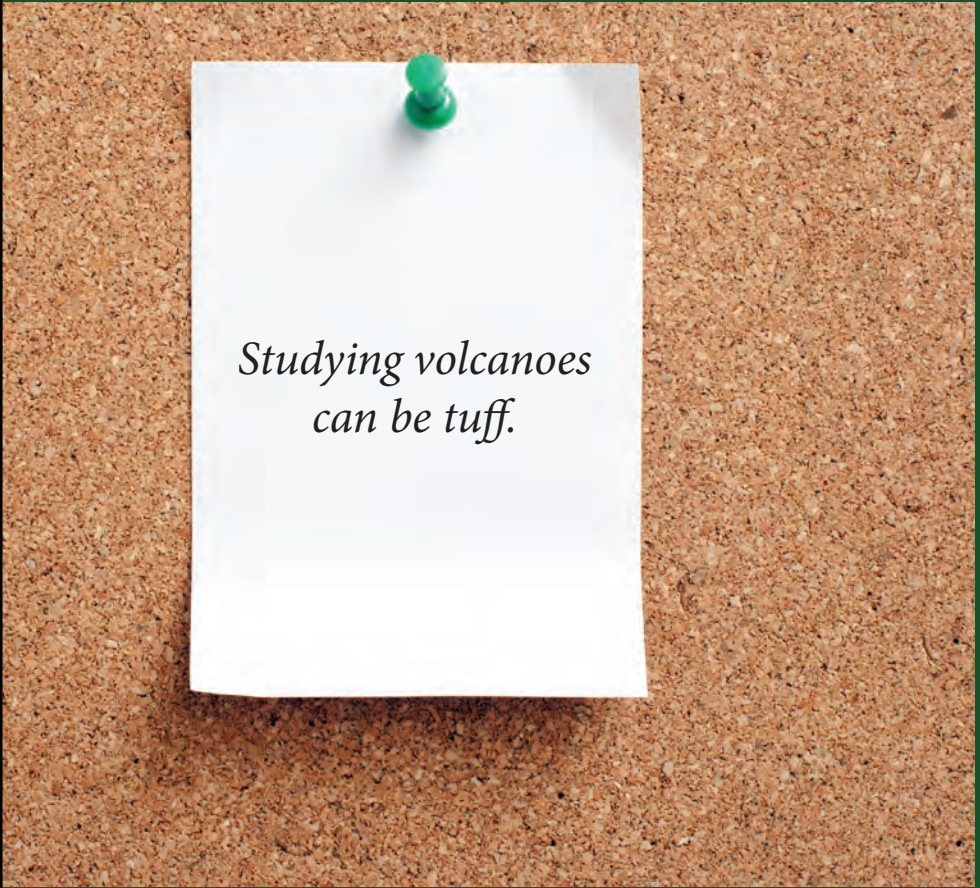
Montana Oil & Gas Fields Update:  
Jim Halvorson 656-0040

### PUBLICATION SALES

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### NEWSLETTER EDITOR

Jessica Renstrom 208-2504



*Studying volcanoes  
can be tuff.*



*Have something geological to sell, give,  
or find?*

*Place a free ad in our MGS Classifieds!*

Contact the Newsletter Editor for more information.

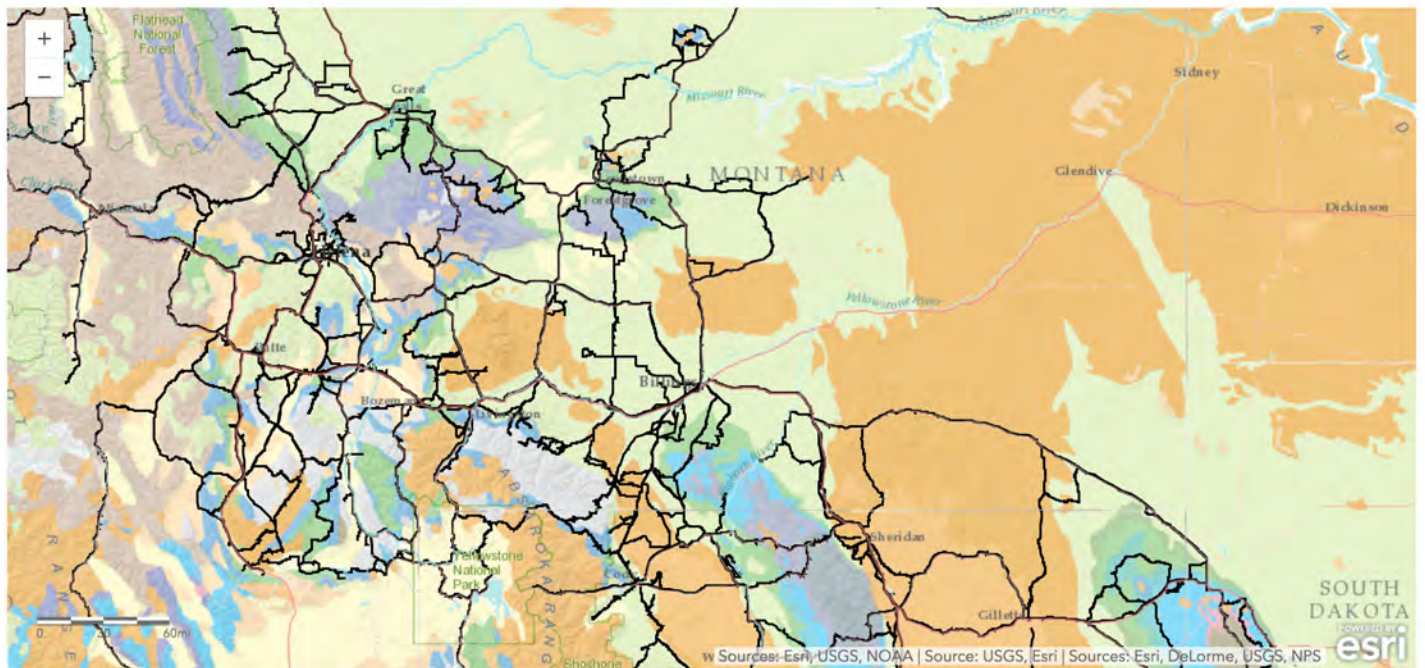


# *Planning your summer road trips?*

Don't forget to consult the  
MGS Interactive Road Log map before you go!

To find a wide variety of road logs covering the entire state of  
Montana and areas of Wyoming, Idaho, & Canada, visit:

<http://mtgeo.org/resources/road-logs/>



Do you have photos of past MGS events, MGS  
members, or Montana geology?

**If so, we'd like to see them!**

For a chance to have your photo featured in  
the MGS Newsletter & MGS Facebook page, please  
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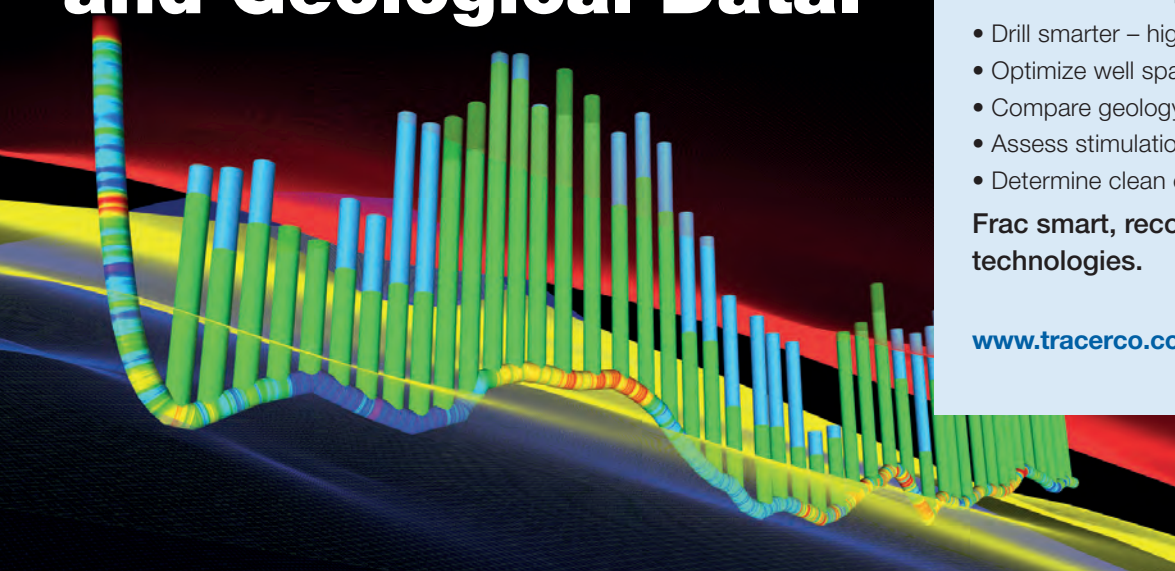
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# *Application Deadline - May 31!*

## **Application form for Montana Geological Society K-12 Earth Science Teacher of the Year Award**

*What better way to promote earth science in the state of Montana  
than to recognize and reward those who do it every day?*

The MGS applauds the hard work of outstanding **K-12 Earth Science Teachers** in Montana. Each year Teacher of the Year (TOTY) applications are reviewed and the most deserving candidate is selected by the MGS Awards Committee to receive \$1000. The MGS winner is then eligible to apply for the regional Teacher of the Year Award (an additional \$2000) through the Rocky Mountain Section of the American Association of Petroleum Geologists (RMS-AAPG). The winner of the RMS-AAPG award becomes the RMS-AAPG nominee for the national American Association of Petroleum Geologists award, which is \$6000 (\$3000 for the teacher and \$3000 for their school). That's the potential for \$9000 in cash awards!

If you teach and promote Earth Science in your classroom or in the outdoors, the MGS encourage you to apply for the TOTY Award. The following completed application form and letter of support is all you need. The 2019 Application Deadline is May 31, 2019.

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### **Qualifications for Nomination**

- Teaching must be at a Montana accredited school, any level from K-12.
- Minimum 3 years teaching experience.
- Teaching at least one unit per year on natural resources, defined as:
  - 1) Organic materials such as petroleum, natural gas, and coal,
  - 2) Inorganic substances such as mineral ores, building stone and aggregates,
  - 3) Energy resources from the earth such as geothermal energy.
- Teaching should relate to the scientific study of natural resources, and may include their origin, extraction, historic use, and present use.
- Teaching should also include the use of earth science for decision making related to the preservation of the environment, reclamation, and conservation of resources.

### **Teacher Contact Information**

Name of Teacher	
School	
School Address	
City, ST Zip Code	
Home Phone/Work Phone	
E-Mail Address	

## Tobacco Root Geological Society 44th Annual Field Conference Deer Lodge, Montana, July 25-28, 2019

Deer Lodge is central to the Boulder Batholith and Elkhorn Mountains volcanic field, the Anaconda Metamorphic Core Complex, the Gold Creek placer mines, and the Butte and Anaconda mining districts and their notorious industrial superfund sites. Deer Lodge is also home to the Old Montana Prison and the Grant Kohrs Ranch National Historic Site. It is the ideal base camp for a diversity of geologic field trips and outdoor adventures.

The regional geologic history is rich and varied. Cordilleran folding and thrusting was accompanied by emplacement of the Late Cretaceous Boulder Batholith and Elkhorn Mountains volcanic field. The comagmatic batholith and volcanic field preserve an unusually complete record of Cordilleran continental arc magmatism. Eocene collapse of the fold-thrust belt was marked by caldera-forming eruption of the Lowland Creek volcanic field, extension along low angle detachments, and formation of Anaconda Metamorphic Core Complex. Precious and base metal mineralization—including formation of the Butte Hill copper deposits—accompanied every stage of contraction, collapse, and magmatism.

The region is still seismically active, continuing the basin-and-range-style block faulting that created deep basins in the Deer Lodge, Elk Park, and Whitetail valleys, and lateral transtension in the Lewis and Clark Zone.

### Contacts:

Kaleb Scarberry, field trip and paper submissions

[kscarberry@mtech.edu](mailto:kscarberry@mtech.edu)

(406)496-4743

Colleen Elliott, logistics

[celliot@mtech.edu](mailto:celliot@mtech.edu)

(406)496-4143

Want to help with the conference? Contact Sandy Underwood at

[SandyUnderwood903@hotmail.com](mailto:SandyUnderwood903@hotmail.com)

Petr Yakovlev, logistics

[pyakovlev@mtech.edu](mailto:pyakovlev@mtech.edu)

### Venue:

Powell County High School

709 Missouri Ave, Deer Lodge

**Accommodations and Meals:** There are two camp grounds in town, and rustic camping in the nearby Deer Lodge National Forest. For attendees who eschew camping, hotels and restaurants could be a more civilized option. We recommend making reservations early. See more details at the 2019 TRGS web address for this (<https://www.trgs.org/field-conference>). Details on catering will be published with the formal conference registration announcement on June 1, 2019.





## **AAPG ROCKY MOUNTAIN SECTION ANNUAL MEETING**

**SEPTEMBER 15-18, 2019, CHEYENNE, WYOMING**

# **CALL FOR PAPERS**

**DEADLINE MAY 31, 2019**

The AAPG Rocky Mountain Section with the Wyoming Geological Association invite abstract submissions for the 2019 meeting in Cheyenne.

### **TECHNICAL SESSIONS**

1. History of Exploration and Production in the Rockies
2. Carboniferous of the Northern Rockies
3. Seismic Application in the Rockies
4. Clastic Resource Plays of the Rockies
5. Exploration and Production in the Powder River Basin
6. Advances in Geologic Storage
7. Total Petroleum Systems
8. Mud Rocks in the Rockies – Lessons Learned and Recent Innovations
9. From Basins to Wells; Structural Geology and Geomechanics
10. Special Topic – A Tribute to Bill Cobban and his Contributions to Stratigraphy
11. Tight Oil Plays
12. Reservoir Characterization and Completions for Tight Plays

### **TECHNICAL CO-CHAIRS**

Mike Bingle-Davis    Stephen Whitaker  
mikeb@kirkwoodcompanies.com    switak2@uwyo.edu





WGA  
Attn: RMS 2019  
PO Box 545  
Casper, WY 82602

Instructions for Authors - Submit abstracts via email with subject line "AAPG RMS Abstract Submission" to [aapgrms2019@gmail.com](mailto:aapgrms2019@gmail.com). Indicate whether it is oral or poster. Please submit as .doc file. Abstract text is limited to 2,000 characters (not including spaces).

For more information check out the conference website - <https://rmsaapg2019.com/>



## AAPG ROCKY MOUNTAIN SECTION ANNUAL MEETING

LITTLE AMERICA HOTEL, CHEYENNE, WYOMING  
SEPTEMBER 15-18, 2019



**Hydraulic Fracturing of Horizontal Wells**  
Presenter: Jennifer Miskimins

**Challenges in Horizontal Well Planning and Geosteering**  
Presenters: Andy Finley, Joseph Large, & Jim Suydam

**Multivariate Geostatistical Analysis/ Machine Learning Techniques**  
Presenter: Bill Bashore

**Core Workshop: Comparison of the Mid-Carboniferous Heath and Tyler Intervals, Central Montana to the Williston Basin, North Dakota**  
Presenters: Richard Bottjer, Stephan Nordeng, Timothy Nesheim, & John Curtis

**Sequence Stratigraphy of Unconventional Resource Plays**  
Presenter: Ali Jaffri

**Unconventional Resource Technology**  
Presenters: Andy Finley & Leo Giangiacomo

Photos courtesy of Patrick Amole

Website: <https://rmsaapg2019.com/>

**MONTANA GEOLOGICAL SOCIETY**

**P.O. Box 844**

**Billings, MT 59103**

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**First Name** \_\_\_\_\_ **Middle Initial** \_\_\_\_\_

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**Degree #1** \_\_\_\_\_

**Degree #2** \_\_\_\_\_

**Degree #3** \_\_\_\_\_



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2006 AAPG Datapages - MGS Publications DVD		\$180.00	
2006 AAPG Datapages - MGS Publications DVD (MGS Member price)		\$150.00	
2000 50th Anniversary Symposium		\$20.00	
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